SAMSUNG

SyncMaster 700NF
SyncMaster 900NF

Color Monitor

Owner's Instructions

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Safety Instructions

1. Before connecting the AC power cord to the DC adapter outlet, make sure the voltage designation of the DC adapter corresponds to the local electrical supply.
2. Never insert anything metallic into the monitor openings. Doing so may create the danger of electric shock.
3. To avoid electric shock, never touch the inside of the monitor. Only a qualified technician should open the monitor's case.
4. Never use your monitor if the power cord has been damaged. Do not allow anything to rest on the power cord, and keep the cord away from areas where people can trip over it.
5. Be sure to hold the plug, not the cord, when disconnecting the monitor from an electric socket.
6. Openings in the monitor cabinet are provided for ventilation. To prevent overheating, these openings should not be blocked or covered. Also, avoid using the monitor on a bed, sofa, rug, or other soft surface. Doing so may block the ventilation openings in the bottom of the cabinet. If you put the monitor in a bookcase or some other enclosed space, be sure to provide adequate ventilation.
7. Put your monitor in a location with low humidity and a minimum of dust.
8. Do not expose the monitor to rain or use it near water (In kitchens, near swimming pools, etc.). If the monitor accidentally gets wet, unplug it and contact an authorized dealer immediately. You can clean the monitor with a damp cloth when necessary, but be sure to unplug the monitor first.
9. Place the monitor on a solid surface and treat it carefully. The screen is made of glass and can be damaged if dropped or hit sharply.
10. Locate your monitor near an easily accessible AC outlet.
11. If your monitor does not operate normally – in particular, if there are any unusual sounds or smells coming from it – unplug it immediately and contact an authorized dealer or service center.
12. High temperature can cause problems. Don't use your monitor in direct sunlight, and keep it away from heaters, stoves, fireplaces, and other sources of heat.
13. Unplug the monitor when it is going to be left unused for an extended period of time.
14. Unplug your monitor from the AC outlet before any service.

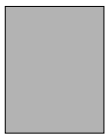
CAUTION

RISK OF ELECRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

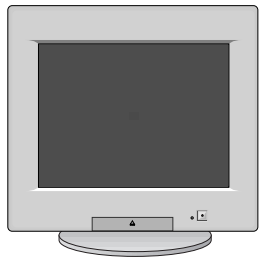
Unpacking Your Monitor

Please make sure the following items are included with your monitor. If any items are missing, contact your dealer.



Manual

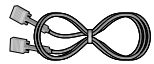
Warranty Card
(Not available in all locations)



Monitor and Stand

CD-ROM

Power Cord



Signal Cable

Connecting Your Monitor

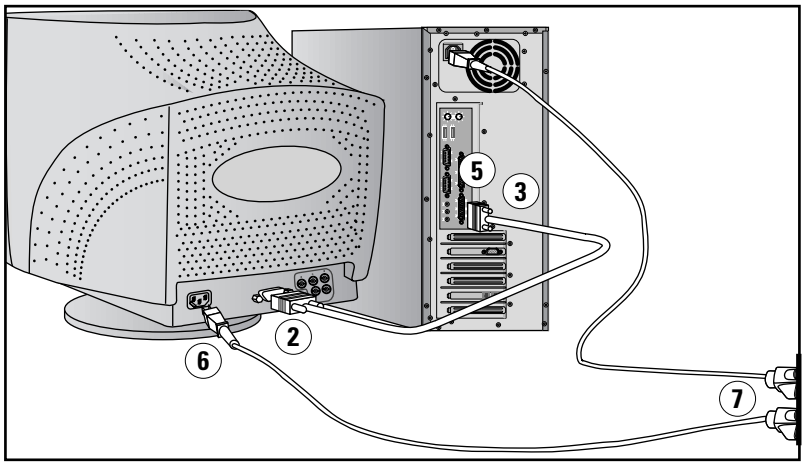


Figure 1. Cable connections

1 Turn off your computer and unplug its power cord.

2 Connect the signal cable to the D-SUB or BNC signal port on the back of your monitor.

3 If you are using an IBM-compatible computer, skip to step 5. If you are using a Macintosh computer, connect the other end of the signal cable to a Macintosh adapter.

4 Follow the instructions included with your adapter to set the pins on your adapter, if necessary.

5 Connect the signal cable (with an adapter, if necessary) to the video port on the back of your computer. This port might be directly attached to your computer, or it might be part of a video adapter, video card, or graphics card.

6 Connect the power cord for your monitor to the power port on the back of the monitor.

7 Plug the power cords of your computer and your monitor into a nearby outlet.

8 Turn on your computer and monitor. If your monitor displays an image, installation is complete.

Plug and Play

Our adoption of the new VESA¤ Plug and Play solution eliminates complicated and time consuming setup. It allows you to install your monitor in a Plug and Play compatible system without the usual hassles and confusion. Your PC system can easily identify and configure itself for use with your display. This monitor automatically tells the PC system its Extended Display Identification (EDID) data using Display Data Channel (DDC) protocols so the PC system can automatically configure itself to use the flat panel display. If your PC system needs a video driver, following the instructions given below according to the operating system your computer uses.

Installing the Video Driver

When prompted by the operating system for the monitor driver, insert the Driver diskette/ CD-ROM included with this monitor. Driver installation is slightly different from one operating system to another. Follow the directions as appropriate for the operating system you have.

Windows¤ 2000 and Windows¤ 98

1. Windows¤ 2000 and Windows¤ 98 will auto-detect your new monitor and start the "Add New Hardware Wizard" if the drivers are not already installed. Click the **NEXT** button to search for drivers.
2. Check the diskette/CD-ROM drive box to install the drivers off the diskette/CD-ROM provided with your monitor and click **NEXT**.
3. Confirm that Windows found the driver on the diskette/CD-ROM and click **NEXT** again to install the driver.

To manually install or update the driver, follow the directions below:

1. Click on **START**, **SETTINGS**, **CONTROL PANEL**, **DISPLAY SETTINGS** tab, **ADVANCED**, **MONITOR** tab, **CHANGE**. This will start the "Add New Hardware Wizard".
2. Follow the same directions as given in the steps in the section above.

Windows¤ 95

To determine the version of Windows¤ 95 that your computer uses, right click on the **My Computer** icon on the Windows desktop and select **Properties**. The version number can be seen on the **General** section under "System:". Follow the directions given below according to the version of your Windows¤ 95 operating system:

Version 4.00.950A

1. Click on **START**, **SETTINGS**, **CONTROL PANEL**, **DISPLAY SETTINGS** tab, **CHANGE DISPLAY TYPE**, **CHANGE**, **HAVE DISK**.
2. Type the diskette/CD-ROM drive letter in the box and click **OK**.

Version 4.00.950B

1. Click on **START**, **SETTINGS**, **CONTROL PANEL**, **DISPLAY, ADVANCED PROPERTIES, MONITOR** tab**, HAVE DISK.**
2. Type the diskette/CD-ROM letter in the box and click **OK**.

Self-Test Feature Check (STFC)

Your monitor provides a self test feature that allows you to check whether your monitor is functioning properly. If your monitor and computer are properly connected but the monitor screen remains dark and the power indicator is blinking, run the monitor self-test by performing the following steps:

1. Turn off both your computer and the monitor.
2. Unplug the video cable from the back of the computer.
3. Turn on the monitor.

If the monitor is functioning properly, you will see a white box with a red border and inside as shown in the following illustration:

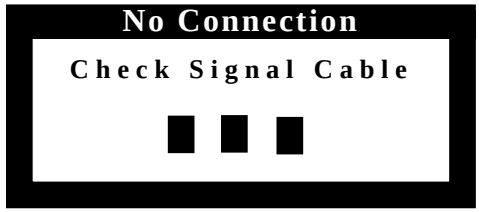


Figure 2. Monitor self test screen

The three boxes inside the border are red, green and blue. Failure of any of the boxes to appear indicates a problem with your monitor. This box also appears during normal operation if the video cable becomes disconnected or damaged.

4 Turn off your monitor and reconnect the video cable; then turn on both your computer and the monitor.

If your monitor screen remains blank after using the previous procedure, check your video controller and computer system; your monitor is functioning properly.

Getting Help

If your monitor does not display an image, check your cable connections and refer to Troubleshooting on page 26.

Warm-up Time

All monitors need time to become thermally stable the first time you turn them on each day. Therefore, to achieve more accurate adjustments for parameters, allow the monitor to warm (be on) for at least 30 minutes before making any screen adjustments.

User Controls

Your samsung SyncMaster computer monitor allows you to easily adjust the characteristics of the image being displayed. All of these adjustments are made using the control buttons on the front of the monitor. These buttons operate the on-screen menu, which shows you the monitor's settings and allows you to change those settings.

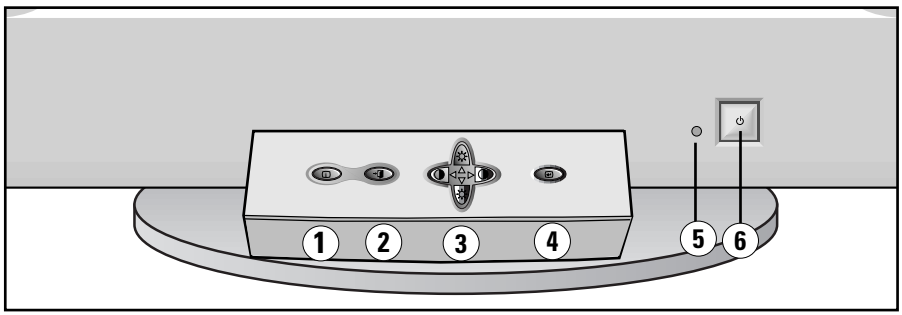


Figure 3. User control locations

1 **Information (ⓘ) button**
Use this button to show the horizontal and vertical frequencies and the resolution received from your computer or video board.

2 **EXIT (⇢◧) button**
Use this button to Exit the active menu or the OSD.

3 **▲ , ▼ , ◀ , ▶ (☼ / ◑)buttons**
These buttons allow you to highlight and adjust items in the menu. These buttons are also direct access buttons for the contrast and brightness feature. All menus automatically save your adjustments 3 seconds after you stop adjusting the setting.

4 **MENU (↵) button**
Use this button to open the OSD and activate a highlighted menu item.

5 **Power indicator**
This light glows green during normal operation, and blinks amber once as the monitor saves your adjustments.

6 **Power button**
Use this button to turn the monitor on and off.

Automatic Save

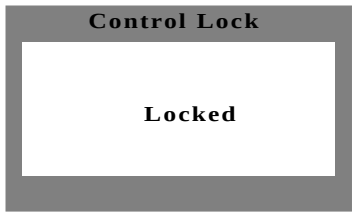
Whenever you open the on-screen menu and allow an adjustment window to remain active for about 3 seconds without pressing another button, the monitor automatically saves any adjustments you have made. These changes are saved into a user area in the monitor. User areas are reserved according to the signal frequency from your computer. The monitor can save adjustments for up to 10 user modes. It has 8 factory preset or preload modes, one for each signal frequency as listed in Display Modes on page 29.

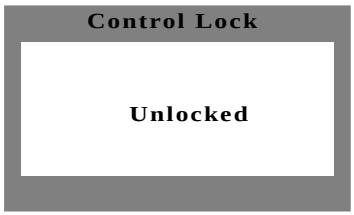
If you have made no adjustments, the on-screen menu disappears and the monitor does not save anything. To exit without saving the changes you have made, press the **EXIT** ( ) button before the 3 seconds elapse.

Direct-Access Feature

The feature described on this page and the next page can be accessed quickly, at the touch of one button. When you finish making adjustments to a feature, push the **EXIT** (⇢) button to turn off the menu or allow the OSD to time out and disappear automatically

OSD Lock/Unlock

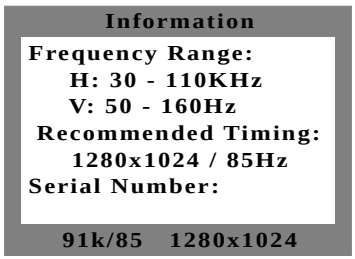




Allows you to secure the current control settings so that they cannot be inadvertently changed. You can unlock the OSD controls at any time by using the same procedure.

1 Push and hold the **MENU** (↵) button for 10 seconds or more to Lock or to Unlock.

Information



The Information on this screen shows available horizontal and vertical frequencies and display resolution.

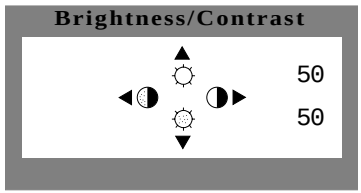
1 With the menu off, push the ⓘ button once to see information about your monitor. The current Horizontal/Vertical frequencies received from the computer or video board is displayed along the bottom.

2 Push the ⓘ button once more to see the user defined timing mode.

3 Scroll down with the button to display the factory preset timings.

Note: These screens do not allow any changes to the settings; they are for information only.

Brightness/Contrast



This feature will adjust the monitor's brightness/contrast. Once you have adjusted one of these features, push the **MENU**(↵)button once to close the brightness/contrast screen.

1 With the menu off, push the ▲, ▼, ▶ or ◀ button. The brightness/contrast display will appear.

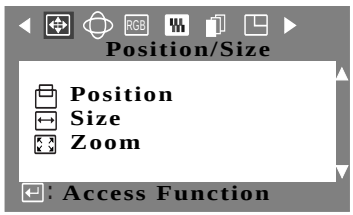
2 Push the ▲ button to increase the brightness or the ▼ button to decrease the brightness; push the ▶ button to increase the contrast or the ◀ button to decrease the contrast.

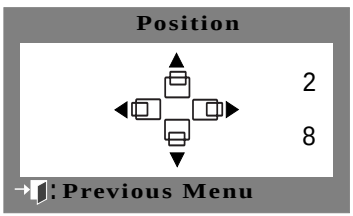
Menu Features

The following features can all be accessed using your monitor's on-screen menu system. Follow the instructions below to adjust the features.

Once you are finished making adjustments to a feature, push the **EXIT** button to return to the then push **EXIT** again to turn off the menu.

Position





Follow these instructions to change the position of the monitor's entire display.

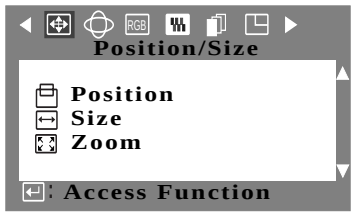
1 With the menu off, push the ↵ button. Push the ◀ button or ▶ button until the "Position / Size" screen is displayed.

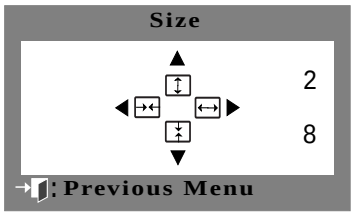
2 Push the ▲ button or ▼ button to select **Position**.

3 Push the ↵ button to open the Position adjustment screen.

4 Use the ▲ and ▼ buttons to change the vertical position of the monitor's viewing area; use the ◀ and ▶ buttons to change the horizontal position of the monitor's viewing area.

Size

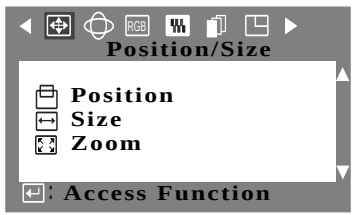


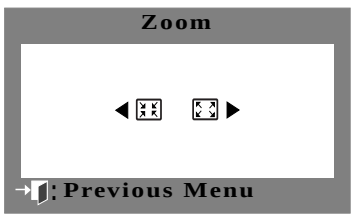


Follow these instructions to change the size of the monitor's entire display.

1. With the menu off, push the ↵ button. Push the ◀ button or ▶ button until the "Position / Size" screen is displayed.
2. Push the ▲ button or ▼ button to select **Size**.
3. Push the ↵ button to open the Size adjustment screen.
4. Use the ▲ and ▼ buttons to change the vertical Size of the monitor's viewing area; use the ◀ and ▶ buttons to change the horizontal Size of the monitor's viewing area.

Zoom

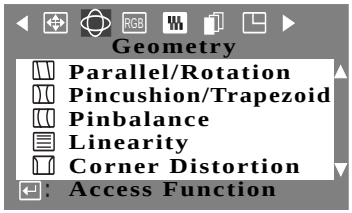


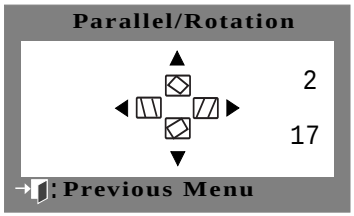


Follow these instructions to get a close-up or a longshot view of the monitor's viewing area.

1. With the menu off, push the ↵ button. Push the ◀ button or ▶ button until the "Position / Size" screen is displayed.
2. Push the ▲ button or ▼ button to select **Zoom**.
3. Push the ↵ button to open the Zoom adjustment screen.
4. Use the ◀ button to decrease the screen viewing area. Use the ▶ button to enlarge the screen viewing area.

Parallel/Rotation

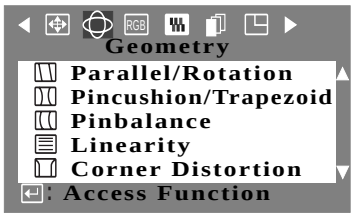


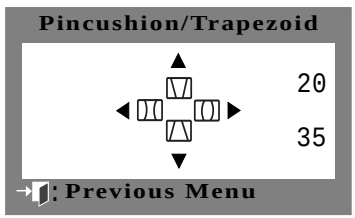


Adjust the parallelogram setting when the display is leaning left or right; adjust the rotation setting when the entire display is tilted left or right.

1. With the menu off, push the ↵ button. Push the ◀ button or ▶ button until the "Geometry" screen is displayed.
2. Push the ▲ button or ▼ button to select **Parallel/Rotation**.
3. Push the ↵ button to open the Parallel/Rotation adjustment screen.
4. Use the ◀ button or ▶ button to adjust the parallel setting; use the ▲ button or ▼ button to adjust the rotation setting.

Pincushion/Trapezoid

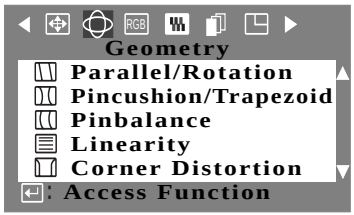


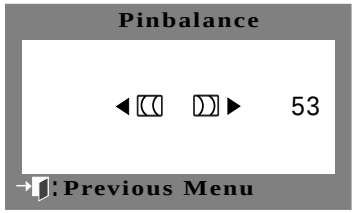


Adjust the pincushion setting when the sides of the display are bowed in or bowed out; adjust the trapezoid setting when the top or bottom of the display is too large or small.

1. With the menu off, push the ↵ button. Push the ◀ button or ▶ button until the "Geometry" screen is displayed.
2. Push the ▲ button or ▼ button to select **Pincushion/Trapezoid**.
3. Push the ↵ button to open the Pincushion/Trapezoid adjustment screen.
4. Use the ◀ button or ▶ button to adjust the pincushion setting; use the ▲ button or ▼ button to adjust the trapezoid setting.

Pinbalance

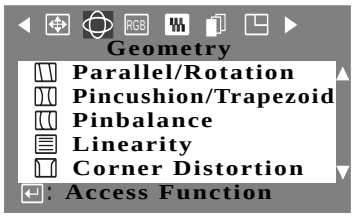


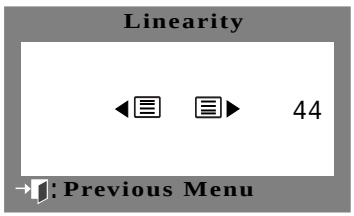


Adjust the pinbalance setting when the sides of the display are bowed towards the left or right.

1. With the menu off, push the ↵ button. Push the ◀ button or ▶ button until the "Geometry" screen is displayed.
2. Push the ▲ button or ▼ button to select **Pinbalance**.
3. Push the ↵ button to open the Pinbalance adjustment screen.
4. Use the ◀ button or ▶ button to adjust the pinbalance setting.

Linearity

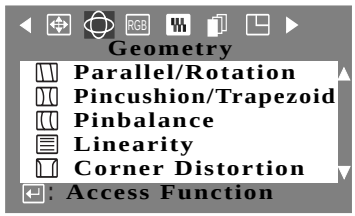


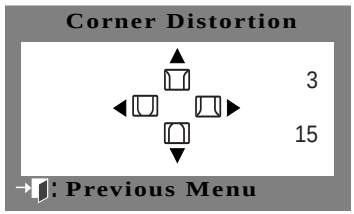


Adjust the linearity setting when the display image is compressed at the top, bottom.

1. With the menu off, push the ↵ button. Push the ◀ button or ▶ button until the "Geometry" screen is displayed.
2. Push the ▲ button or ▼ button to select **Linearity**.
3. Push the ↵ button to open the Linearity adjustment screen.
4. Use the ◀ button or ▶ button to adjust the vertical Linearity.

Corner Distortion





Adjust corner distortion when the border/outside line(s) displayed on the screen are not straight.

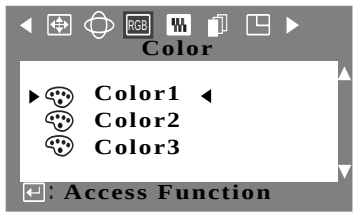
1 With the menu off, push the ↵ button. Push the ◀ button or ▶ button until the "Geometry" OSD is displayed.

2 Push the ▲ button or ▼ button to select **Corner Distortion**.

3 Push the ↵ button to access the Corner distortion adjustment screen.

4 Use the ▲ button or ▼ button to make the upper border/line straight.
Use the ◀ button or ▶ button to make the lower border/line straight.

Color



Color temperature is a measure of the "warmth" of the image colors. The available range is between 5000 to 9300K. Follow these steps to change the color temperature and adjust individual R, G, B color control.

1 With the menu off, push the ↵ button. Push the ◀ button or ▶ button until the "Color" screen is displayed.

2 Use the ▲ button or ▼ button to select **Color 1**, **Color 2**, or **Color 3**.

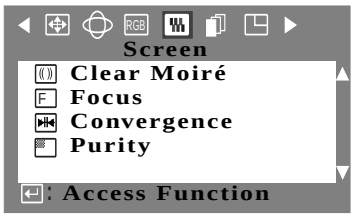
3 Push the ↵ button to open the "Color 1", "Color 2", or "Color 3" adjustment screen.

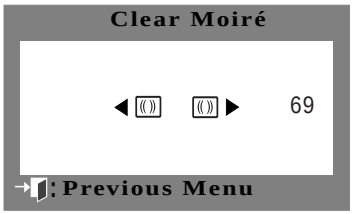
4 The current color temperature is shown highlighted between 9300 and 5000K. Use the ◀ button or ▶ button to adjust the color temperature.

5 Adjust the color temperature as close to the desired temperature as possible using only the ◀ and ▶ buttons. To fine tune the color hue, use the ▲ or ▼ button to select **R**(ed), **G**(reen), or **B**(lue), then use the ◀ and ▶ buttons until you reach the desired color.

Note: Recall does not reset the color settings.

Clear Moiré

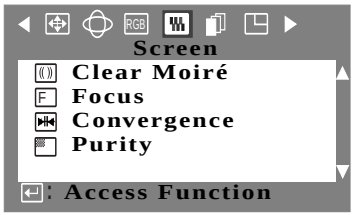


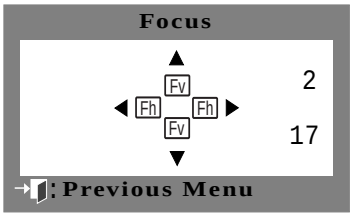


A "moiré" pattern can appear on your screen, looking like a series of concentric circles or arcs. To eliminate this pattern, use the clear moiré adjustments.

1. With the menu off, push the ↵ button. Push the ◀ button or ▶ button until the "Screen" OSD is displayed.
2. Push the ▲ button or ▼ button to select **Clear Moiré**.
3. Push the ↵ button to open the clear moiré adjustment screen.
4. Use the ◀ button or ▶ button to adjust horizontal moiré.

Focus

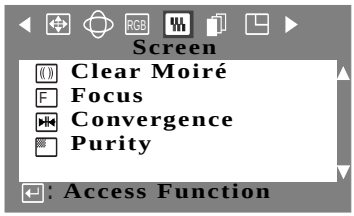


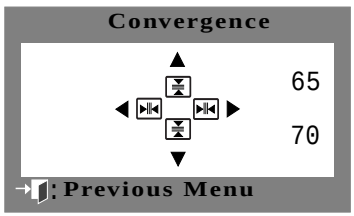


Use the focus control when the image displayed on the screen is not sharp in all areas.

1. With the menu off, push the ↵ button. Push the ◀ button or ▶ button until the "Screen" OSD is displayed.
2. Push the ▲ button or ▼ button to select **Focus**.
3. Push the ↵ button to open the Focus adjustment screen.
4. Use the ◀ button or ▶ button to adjust the focus along the left and right areas of the screen. Use the ▲ button or ▼ button to adjust the top and botton areas of the screen.

Convergence

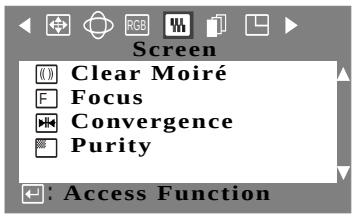


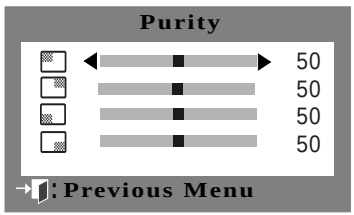


Convergence affects picture clarity. Adjust the horizontal or vertical convergence to properly align the color dots that make up the image.

1. With the menu off, push the ↵ button. Push the ◀ button or ▶ button until the "Screen" OSD is displayed.
2. Push the ▲ button or ▼ button to select **Convergence**.
3. Push the ↵ button to open the convergence adjustment screen.
4. Use the ◀ button or ▶ button to adjust the horizontal convergence; use the ▲ button or ▼ button to adjust the vertical convergence.

Purity (only for 900NF model)

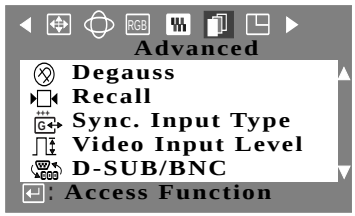


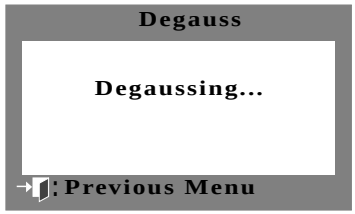


Adjusts the color purity of the overall image.

1. With the menu off, push the ↵ button. Push the ◀ button or ▶ button until the "Screen" OSD is displayed.
2. Push the ▲ button or ▼ button to select **Purity.**
3. Push the ↵ button to access the purity adjustment screen.
4. Use the ▲ button or ▼ button to select the adjustment area, and the ◀ button or ▶ button to perform the adjustment.

Degauss





The Degauss feature will remove color impurities caused by magnetic fields. Do not use the Degauss feature more than once within a 30-minute period.

1 With the menu off, push the ↵ button. Push the ◀ button or ▶ button until the Advanced" screen is displayed.

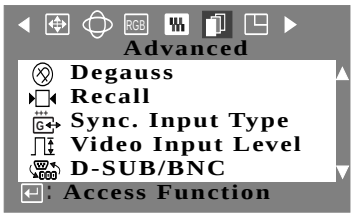
2 Push the ▲ button or ▼ button to select **Degauss**.

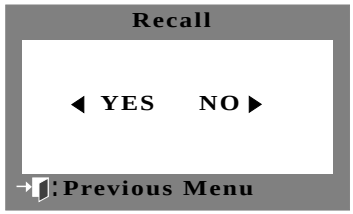
3 Push the ↵ button to execute the degauss function. The degaussing screen will appear.

NOTE: The monitor may buzz momentarily, the image colors may change and the image will jiggle for a few seconds. These effects are normal.

4 After a few seconds, the degauss main menu will return.

Recall





Use the recall feature to reset these monitor settings to their original levels: Position, Size, Pincushion, Trapezoid, Parallelogram, Pinbalance, Rotation, Clear Moiré, Convergence, and Purity.

1 With the menu off, push the ↵ button. Push the ◀ button or ▶ button until the "Advanced" screen is displayed.

2 Push the ▲ button or ▼ button to select **Recall**.

3 Push the ↵ button to open the recall selection screen.

4 Push the ◀ button to select **YES**. If you don't want to reset the monitor, use the ▶ button to select **NO**.

NOTE: If you have selected "YES", all settings listed above will be reset. All other settings will remain the same.

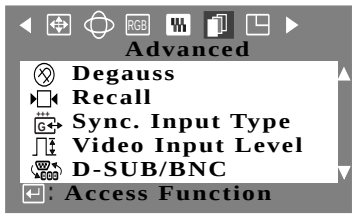
CAUTION: This operation resets all of the data in the user memory area for the current timing signal.

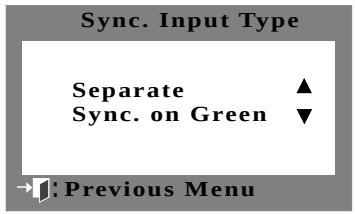
User-Delete

Push and hold **EXIT** (→◧).button for at least 5 seconds.

CAUTION: This operation resets all of the data in the user memory area. If this occurs, you must remake your user adjustmensts.

Sync. Input Type

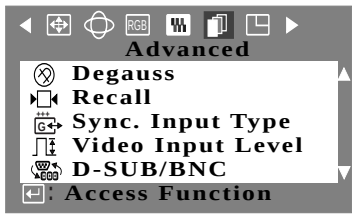


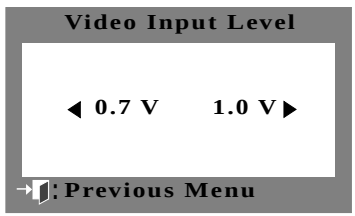


Use this menu to set your monitor to the correct type of synchronization. Select "Separate" if the computer is sending a separate synchronization signal. Select "Sync. on Green" if the computer expects the monitor to synchronize with the green signal it sends. Refer to your computer or video card user's manual to determine the correct setting.

1. With the menu off, push the ↵ button. Push the ◀ button or ▶ button until the "Advanced" screen is displayed.
2. Push the ▲ button or ▼ button to select **Sync. Input Type**.
3. Push the ↵ button to open the sync input type selection screen.
4. Use the ▲ button or ▼ button to select **Separate** or **Sync. on Green**.

Video Input Level

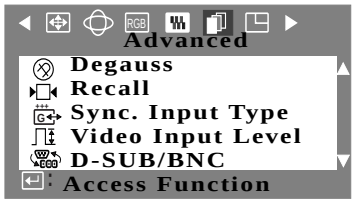


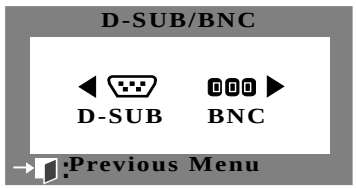


Some video cards use video signals higher than 1.0 V which causes the display to be very bright. For those video cards, use this feature to select the 1.0 V Level.

1. With the menu off, push the ↵ button. Push the ◀ button or ▶ button until the "Advanced" screen is displayed.
2. Push the ▲ button or ▼ button to select **Video Input Level**.
3. Push the ↵ button to open the video input level selection screen.
4. Use the ◀ or ▶ buttons to select 0.7 V or 1.0 V.

D-SUB/BNC





Use this menu to choose between the signal source connected to the BNC connector input and the signal source connected to the D-SUB connector input.

1 With the menu off, push the ↵ button. Push the ◀ button or ▶ button until the "Advanced" screen is displayed.

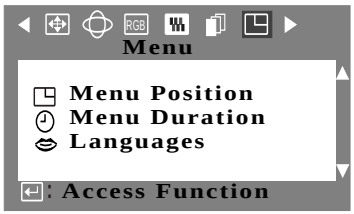
2 Push the ▲ button or ▼ button to select **D-SUB/BNC.**

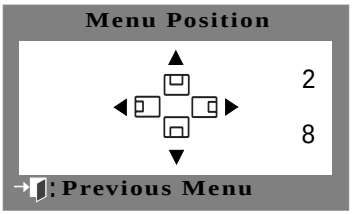
3 Push the ↵ button to open the D-SUB/BNC selection screen.

4 Use the ◀ button or ▶ button to select **D-SUB** or **BNC**.

NOTE: When you are finished, wait for a few seconds and the screen will blank then display the image from the new signal source (Other computer). A cable must be connected to both inputs to use this function.

Menu Position





You can change the position where the OSD menu appears on your monitor.

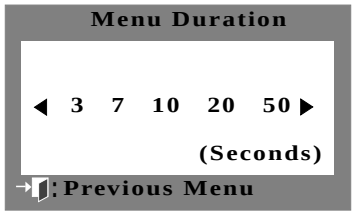
1 With the menu off, push the ↵ button. Push the ◀ button or ▶ button until the "Menu" screen is displayed.

2 Push the ▲ button or ▼ button to select **Menu Position**.

3 Push the ↵ button to open the menu position adjustment screen.

4 Use the ▲ , ▼ , ◀ or ▶ button to place the menu in the position you prefer.

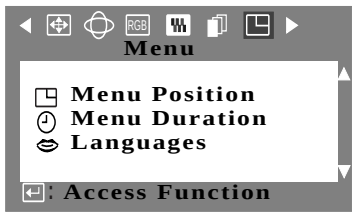
Menu Duration

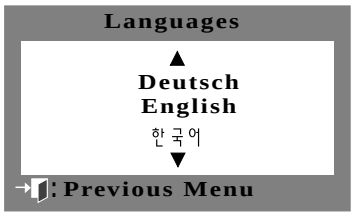


The menu will automatically turn off if no adjustments are made for a certain time period. You can set the amount of time the menu will wait before it turns off.

1. With the menu off, push the ↵ button. Push the ◀ button or ▶ button until the "Menu" screen is displayed.
2. Push the ▲ button or ▼ button to select **Menu Duration**.
3. Push the ↵ button to open the menu duration selection screen.
4. Use the ◀ or ▶ buttons to select **3, 7, 10, 20,** or **50** seconds. 10 seconds is the default value.

Languages





Follow these steps to change the language used in the menu. The language chosen affects only the language of the OSD. It has no effect on any software running on the computer.

1. With the menu off, push the ↵ button. Push the ◀ button or ▶ button until the "Menu" screen is displayed.
2. Push the ▲ button or ▼ button to select **Languages**.
3. Push the ↵ button to open the language selection screen.
4. Use the ▲ button or ▼ button to select the language you would like to use. You can choose one of nine languages (English, Korean, Russian, Swedish, Portuguese, Italian, French, Spanish, or German).

PowerSaver

This monitor has a built-in power management system called PowerSaver. This power management system saves energy by switching your monitor into a low-power mode when it has not been used for a certain amount of time. The available modes are "On," "Standby," "Suspend," and "Off".

This power management system operates with a VESA DPMS compliant video card installed in your computer. You use a software utility installed on your computer to set up this feature. See the table below for details.

Table 1. Power-saving modes

State	Normal Operation	Power-Saving Function mode (EPA/NUTEK)		
		Standby Mode	Suspend Mode Position A1	Power-off Mode Position A2
Horizontal Sync Vertical Sync Video	Active Active Active	Inactive Active Blanked	Active Inactive Blanked	Inactive Inactive Blanked
Power Indicator	Green	Amber	Amber/Green Blinking (0.5 sec. interval)	Amber Blinking (1 sec. interval)
Power Consumption	**700NF**: 130W (Max.) 110W (Nom.) **900NF**: 150W (Max.) 130W (Nom.)	60W(Nom.)	Less than 15W	Less than 3W

NOTE: This monitor automatically returns to normal operation when horizontal and vertical sync return. This occurs when you move the computer's mouse or press a key on the keyboard.

This monitor is EPA ENERGY STAR® compliant and NUTEK compliant when used with a computer equipped with VESA DPMS functionality.

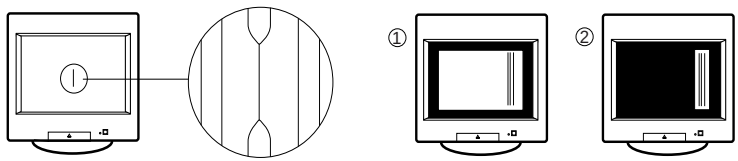
For energy conservation, turn your monitor OFF when it is not needed, or when leaving it unattended for long periods.

Q & A

Black vertical lines are visible on the screen.

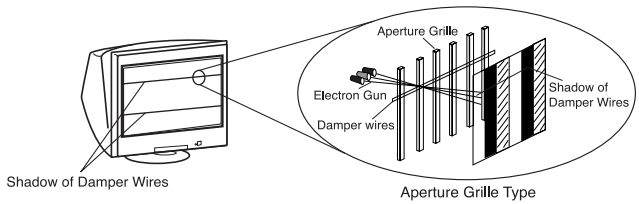
Thin vertical black lines on one or both sides of the screen. This minor condition is caused by grille element overlap which can occur during shipping. We suggest slapping the cabinet sides with an open hand after the monitor is warm.

If this fails, position an open white window over the affected area of the screen and maximize the brightness and contrast controls. This will cause localized heating of the overlap which will clear permanently in a few minutes. Be sure to readjust the brightness and contrast controls back to the normal viewing levels after this procedure.



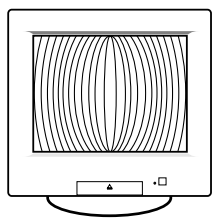
Two fine horizontal lines are visible on the screen.

The 2 very faint thin lines across the screen are normal. They are caused by the aperture grille stabilization filaments which are required for all aperture grille CRTs'.



Moiré is a type of natural interference which produces soft or wavy lines on your screen. It may appear due to interference between the regulated pattern of the picture from the input signal and the phosphor pitch pattern of the CRT. Refer to page 17 "Clear Moiré" for more detail.

Example of moiré:



Troubleshooting

Before calling for service, check the information in this section to see if you can remedy any problems yourself.

If you do need assistance, please call the phone number on the warranty card, the phone number on the back cover of this manual, or contact your dealer.

Table 2. Troubleshooting problems

Symptom	Corrective Actions
There is no screen image	• Check to see that both the monitor and the computer are plugged in and turned on.
"No Connection, Check Signal Cable" appears	• Check the signal cable connections between the computer and the monitor.
"Sync. Out of Range" appears	• Check the maximum resolution and the frequency on the video port of your computer. • Compare these values with the data in the Display Modes Timing chart, on page 29
The image is too light or too dark	• Adjust the Brightness or Contrast settings.
The image is too large or too small	• Adjust the Size settings.
The colors are distorted with dark or shadowed areas	• Activate the Degauss feature.
The power indicator is amber, amber/ green blinking or amber blinking	• The monitor is using its power management system. Check the power management utility on your computer
You need the monitor driver software	• You can download the driver from the internet at http: //www.samsungelectronics. com/support/ downloads/monitor/index.html

Specifications

Table 3. Specifications

Picture Tube	**700NF** : 43.0 cm (17") Full square type [40.6 cm(16") Viewable] **900NF** : 48.2 cm (19") Full square type [45.8 cm(18") Viewable] Flat face, 90° Deflection Dot pitch : 0.25 mm Anti-reflection coating with anti-electrostatic properties Medium-short persistence phosphor
Synchronization	Horizontal: **700NF** : 30 kHz to 96 kHz (Automatic) **900NF** : 30 kHz to 110 kHz (Automatic) Vertical: **700NF** : 50 Hz to 160 Hz (Automatic) **900NF** : 50 Hz to 160 Hz (Automatic)
Display Colors	Unlimited Colors
Maximum Resolution	Horizontal: 1600 Dots Vertical: 1200 Lines
Active Display	Horizontal: **700NF** : 312 ± 3 mm (12.28" ± 0.12") **900NF** : 352 ± 3 mm (13.38" ± 0.12") Vertical: **700NF** : 234 ± 3 mm (9.12" ± 0.12") **900NF** : 264 ± 3 mm (10.39" ± 0.12") (Active display size is dependent upon signal timing and image size selection.)
Input Signal, Terminated	Video signal: Analog video 0.7 Vpp positive at 75 Ω Separate sync.: TTL Level, positive or negative Composite sync.: TTL Level, positive or negative Sync-on-green: Composite sync 0.3 Vpp negative (Video 0.7 Vpp positive)
Maximum Pixel Clock	**700NF** : 205MHz **900NF** : 240MHz
Power Supply	AC 100-240 V ± 10%, 60 Hz/50 Hz ± 3 Hz
Power Consumption	**700NF** :130 W (Maximum) **900NF** : 150 W (Maximum)
Dimensions/Weight (W x D x H)	Unit: **700NF** : 16.3 x 17.2 x17.6 in; 43.4 lbs(415 x 438 x 448 mm;19.7 kg) **900NF** :18,4 x 18.0 x19.4 in; 55.8 lbs (468 x458 x493 mm; 25.3 kg) Carton:**700NF** : 22.2 x 22.9 x21.6 in; 50.7lbs (564 x 581 x 548 mm; 23.0 kg) **900NF** : 22.5 x 24.4 x22.6 in; 64.6lbs (571x620 x 574 mm; 29.3 kg) (All measurements approximate)
Environmental Considerations	Operating Temperature: 32°F to 104°F (0°C to 40°C) Humidity: 10% to 80% Storage Temperature: -4°F to 113°F(-20°C to 45°C) Humidity: 5% to 95%

NOTE: *Design and specifications are subject to change without prior notice.*

Pin Assignments

Table 4. 15-Pin D-SUB connector

Sync. Type	15-Pin Side of the Signal Cable (Figure 1)			Cable Adapter (Figure 2)
Pin No.	**Separate**	**Composite**	**Sync on Green**	**Apple MacII**
1	Red	Red	Red	GND-R
2	Green	Green	Green+Sync.	Red
3	Blue	Blue	Blue	H/V Sync.
4	GND	GND	GND	Sense 0
5	DDC Return	DDC Return	DDC Return	Green
6	GND-R	GND-R	GND-R	GND-G
7	GND-G	GND-G	GND-G	Sense 1
8	GND-B	GND-B	GND-B	Reserved
9	Reserved	Reserved	Reserved	Blue
10	GND-Sync./ Self-Raster	GND-Sync./ Self-Raster	GND-Sync./ Self-Raster	Sense 2
11	GND	GND	GND	GND
12	DDC Data	DDC Data	DDC Data	V-Sync.
13	H-Sync.	H-Sync.	Not Used	GND-B
14	V-Sync.	Not Used	Not Used	GND
15	DDC Clock	DDC Clock	DDC Clock	H-Sync.

Figure 1: Male Type

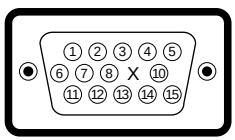


Figure 2: Male Type

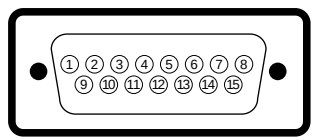
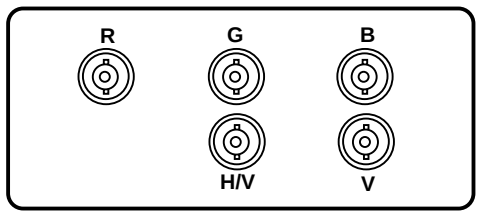


Table 5. BNC Connectors

Pin Assignment	Signals		
	Sync-On-Green	**Composite Sync.**	**Separate Sync.**
R	Red	Red	Red
G	Green+Sync.	Green+Sync.	Green
B	Blue	Blue	Blue
H/V	NC	H/V Comp. Sync.	H-Sync.
V	NC	NC	V-Sync.

NC = No Connection



Display Modes

For the display modes listed below, the screen image has been optimized during manufacture.

Table 6. Preset timing modes

Display Mode	Horizontal Frequency (kHz)	Vertical Frequency (Hz)	Pixel Clock (MHz)	Sync Polarity (H/V)
IBM, VGA2, 720 x 400	31.469	70.087	28.322	–/+
IBM, VGA3, 640 x 480	31.469	59.940	25.175	–/–
VESA, 800 x 600	53.674	85.061	56.250	+/+
VESA, 1024 x 768 **(700NF)**	60.023	75.029	78.750	+/+
VESA, 1024 x 768	68.677	84.997	94.500	+/+
VESA, 1280 x 1024	79.976	75.025	135.000	+/+
VESA, 1280 x 1024	91.146	85.024	157.500	+/+
VESA, 1600 x 1200 **(900NF)**	106.250	85.000	229.500	+/+
MAC. 832 x 624 **(700NF)**	49.726	74.551	57.284	–/–
MAC. 1152 x 870 **(900NF)**	68.681	75.062	100.000	–/–

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Regulatory Information

FCC Information

User Instructions

The Federal Communications Commission Radio Frequency Interference Statement includes the following warning:

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television receptions, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

User Information

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

If necessary, consult your dealer or an experienced radio/television technician for additional suggestions. You may find the booklet called How to Identify and Resolve Radio/TV Interference Problems helpful. This booklet was prepared by the Federal Communications Commission. It is available from the U.S. Government Printing Office, Washington, DC 20402, Stock Number 004-000-00345-4.

Warning

User must use shielded signal interface cables to maintain FCC compliance for the product.

Declaration of conformity for products Marked with FCC Logo

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The party responsible for product compliance:

SAMSUNG ELECTRONICS CO., LTD
America QA Lab of Samsung
85 West Tasman Drive
San Jose, CA 95134 USA
Tel) 408-544-5124
Fax) 408-544-5191

Provided with this monitor is a detachable power supply cord with IEC320 style terminations. It may be suitable for connection to any UL Listed personal computer with similar configuration. Before making the connection, make sure the voltage rating of the computer convenience outlet is the same as the monitor and that the ampere rating of the computer convenience outlet is equal to or exceeds the monitor voltage rating.

For 120 Volt applications, use only UL Listed detachable power cord with NEMA configuration 5-15P type (parallel blades) plug cap. For 240 Volt applications use only UL Listed Detachable power supply cord with NEMA configuration 6-15P type (tandem blades) plug cap.

IC Compliance Notice

This Class B digital apparatus meets all requirements of the Canadian Interference-Causing Equipment Regulations of ICES-003.

Cet appareil Numérique de classe B respecte toutes les exigences du Règlemont ICES-003 sur les équipements produisant des interférences au Canada.

MPR II Compliance

This monitor complies with SWEDAC(MPR II) recommendations for reduced electric and magnetic fields.

European Notice

Products with the CE Marking comply with both the EMC Directive (89/336/EEC), (92/31/EEC), (93/68/EEC) and the Low Voltage Directive (73/23/EEC) issued by the Commission of the European Community.

Compliance with these directives implies conformity to the following European Norms:

- EN55022 (CISPR 22) – Radio Frequency Interference
- EN50082-1 : 1992 – Electromagnetic Immunity
- EN60555-2 (IEC555-2) – Power Line Harmonics
- EN60555-3 (IEC555-3) – Voltage Fluctuations
- EN60950 (IEC950) – Product Safety.

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CODE NO.: BH68-00257(Rev. 0.1)

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